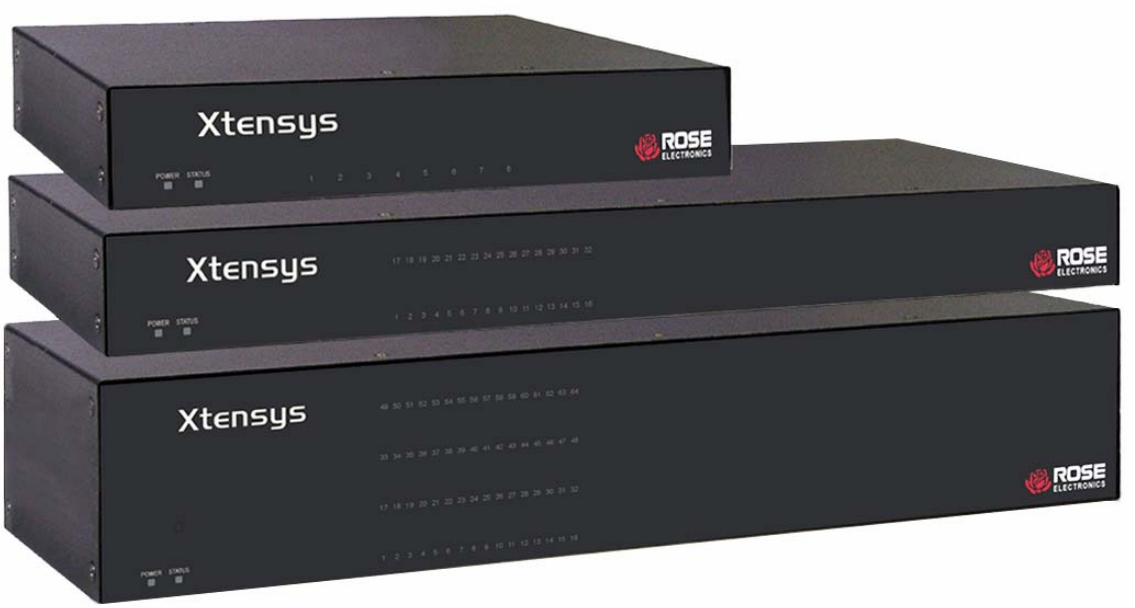
Xtensys

UNIVERSAL MATRIX CONSOLE SWITCH

INSTALLATION
AND
OPERATIONS MANUAL



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ROSE ELECTRONICS

10707 Stancliff Road
Houston, Texas 77099

Phone: (281) 933-7673
WWW.ROSE.COM

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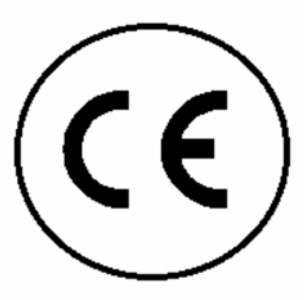
EUROPEAN UNION DECLARATION OF CONFORMITY
ACCORDING TO COUNCIL DIRECTIVE 89/336EEC



This equipment is in conformity with the requirements of the European EMC directive 89/336/EEC in respect of:

EN55022: (Class A)

EN50082-1 / EN60555-2, and

The Low Voltage Directive.

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INTRODUCTION

Disclaimer

While every precaution has been taken in the preparation of this manual, the manufacturer assumes no responsibility for errors or omissions. Neither does the manufacturer assume any liability for damages resulting from the use of the information contained herein. The manufacturer reserves the right to change the specifications, functions, or circuitry of the product at any time without notice.

The manufacturer cannot accept liability for damages due to misuse of the product or other circumstances outside the manufacturer's control. The manufacturer will not be responsible for any loss, damage, or injury arising directly or indirectly from the use of this product.
(See limited warranty)

About this manual

This manual covers the installation, configuration, and the operation of the Xtensys series switches.

Introduction

Thank you for choosing Rose Electronics® Xtensys™ Universal Matrix Console Switch. The Xtensys is the results of Rose Electronics commitment to providing continued state-of-the-art switching solutions for today's demanding workplace. The Xtensys has proven to be a valuable investment for all types of businesses that have the need to monitor, maintain, and access information from multiple computer systems. Its use in large computer facilities gives the IT professional the added flexibility to monitor and maintain thousands of systems, running on different platforms, from one or multiple KVM stations. The Xtensys Universal Matrix Console switch is the common sense switching solution that provides the flexibility, expandability, and security required for today's business environment.

> NOTE: A **K**eyboard, **V**ideo monitor, and **M**ouse are referred to through this manual as a **KVM** station

Rose Electronics' Xtensys Universal Matrix Console switches are designed to meet you switching needs, whatever your system demands are, one user or multiple users, two computers or thousands. All models offer standard features that allow for easy, secure, and complete access to as many computers as your system has from one or multiple KVM stations. CATx cabling is used to connect to the computers and the user stations. This greatly reduces the cable bulk and makes installation easier, quicker, and less expensive.

The Xtensys system automatically adjusts video gain and skew based on the CATx cable type and length, providing a crisp, clear display from all connected computers. The advanced on-screen display (OSD) menus are intuitive and easy to use. The menus guide you through the configuration process with on-screen information for each configuration section, making it easy to configure the Xtensys, the user stations, the computers, and security for the system. There are additional configuration parameters that can be used to personalize the look of the menus and dialog boxes. A help line is provided for each menu selection giving a brief explanation of the selected menu item.

Reliability, security, flash memory technology, versatility, and other advanced technological features ensure the Xtensys Universal Matrix Console Switch will streamline your data center or server room, simplify the maintenance, access and updating of your systems, and easily expand as your system demands increase.

Features

Security

- Unique configuration password for persons authorized to perform configuration maintenance.
- User names and passwords allow controlled access to computers with sensitive information, system data, or restricted applications
- Computers can be assigned to a unique group, allowing authorized access only

Flexibility

- The Xtensys design makes for easy installation, maintenance, and expandability
- Server connections are made easy by using CATx cabling
- Switching to computers can be done by keyboard commands or an on-screen list of computers
- Multi-language capabilities
- Integrated auto-switching power supply accepts 90-240 VAC sources

On-screen display technology

- The Xtensys video pops-up over the computer application display or is automatically generated
- Easy to use menus guide you through the configuration process
- The connection status for all computers can be displayed

Upgradeability

- Free lifetime base firmware upgrades, based on flash memory technology, provide new features and improvements. Base firmware upgrades are available from our web site at www.rose.com

Compatibility

- A variety of hardware platforms can be connected simultaneously to the Xtensys switch without interference, including PCs, Sun systems, IBM RS/6000, HP, DEC, SGI, serial devices, and others
- Full keyboard and mouse emulation and video resolutions up to 1600 x 1280 ensures trouble-free access to most software applications
- Serial support using VT100, VT102, and VT202 terminal emulation
- Standard TTY mode automatically scrolls incoming data

KVM compatibility	
Keyboards	PS/2, Unix, and USB
Monitors	VGA, SVGA, XGA, Composite
Mice	Standard PS/2, PS/2 wheel, USB, and Sun
CPU compatibility	
Computers	Industry standard PCs, Unix systems, Sun, IBM RS/6000, DEC, HP, SGI, and others
Keyboards	Standard PC mode 1, 2, or 3 in PS/2, USB, Sun
Monitors	VGA, SVGA, XGA, Composite, Sync-of-green
Mice	Standard PS/2, PS/2 wheel, Serial (2 or 3 button), USB, Sun

Cable requirements

Cabling for the User Station to the Xtensys switch and from the Xtensys switch to all connected computers, servers, and serial devices require CATx cabling. For each connected computer a Catx transmitter is needed.
The transmitter connects directly to the keyboard, monitor, and mouse ports on the computer and sends this data via CATx cable to the Xtensys switch. Total CATx cable length (user station to Xtensys to computer should not exceed 1,000 feet).

Package content

The shipping package content consists of the following:

- The Xtensys switch
- User Station(s) (as ordered)
- Power cord (North American shipments only)
- Installation and operations manual

If the package contents are not correct, contact Rose Electronics or your reseller, so the discrepancy can be quickly resolved.

Rose Electronics web site

Visit our web site at www.rose.com for additional information on the Xtensys switch and other products offered by Rose Electronics that are designed for data center applications, classroom environments, and many other switching and extending applications.

Registration

Register your copy for future updates by registering at:
http://www.rose.com/htm/pc-online-registration.htm

Quick Start Guide

A quick start guide is provided in Appendix D. This guide shows the basic single unit installation procedure for all models. Expanded system installation is covered in the installation section of this manual.

MODELS

Xtensys models (front)

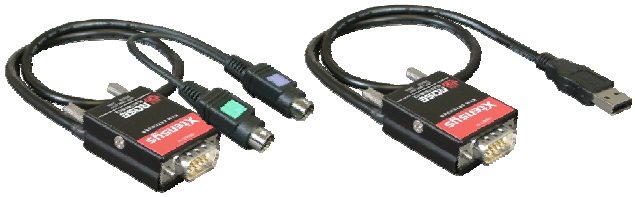
Models	Description / Indicators
	User station Power / Status Indicators
	8X / 16X / 32X switch Power / Status Indicators
	48X / 64x switch Power / Status Indicators
	PS/2 – USB Xtensys Transmitters

Figure 1. Models - Front View

Xtensys models (rear)

Models	Description / Connectors
	User station Power: ICE 320 receptacle Link: RJ45F * Keyboard/Mouse: PS/2 & USB * Video: HD15F Serial: DB9M CPU / KVM: RJ45F
	Xtensys Switch Power: ICE 320 receptacle Link: RJ45F * Keyboard/Mouse: PS/2 & USB * Video: HD15F **Chassis can be configured with:** 4 KVM Inputs and: 8, 16, or 32CPU ports
	Xtensys Switch Power: ICE 320 receptacle Link: RJ45F * Keyboard/Mouse: PS/2 & USB * Video: HD15F **Chassis can be configured with:** 4, 8, 12, or 16 KVM Inputs and: 48, or 64 CPU ports

* Local KVM access is an option

Figure 2. Models – rear view

SITE PLANNING

System Overview

The Xtensys switch is designed with the latest in KVM switching technology. It has the capability and flexibility to configure to most keyboards, video monitors, mice, servers, computers, and serial devices. The Xtensys switch provides the framework for a complete switching system. Remote users, computers, servers, and serial devices all interface to the Xtensys switch over CATx cabling.

The Xtensys design makes the unit easy to install, expand, and maintain. The Xtensys switch can be easily expanded to additional switches which can increase the number of computers that can be accessed. The complete system consists of the Xtensys switch or switches if the system is expanded, one or more user stations, CATx transmitters as required for each connected computer, and the computers, servers, and serial devices that will be connected.

KVM user station

A KVM user station, consisting of a **K**eyboard, **V**ideo monitor, and **M**ouse, connects directly to the corresponding connectors on the rear panel of the user station. A KVM station can also be connected directly to Xtensys for local access (optional).

KVM Station Keyboard and Mouse

The keyboard and mouse that is connected to the user station or locally to the switch can be PS/2 or USB.

KVM Station Video Monitor

The KVM Station video monitor should be capable of supporting the resolution, frequency, and sync type being sent by all connected computer**.** It is recommended that the KVM monitor be a multi-sync monitor capable of resolutions up to 1280 x 1024 @ 75Hz or better.

Computers

The multi-platform support of the Xtensys switch makes it compatible with PCs (PS/2 or USB), UNIX systems, Sun, Mac, and compatible serial devices.

CATx Transmitter

Each connected computer uses a CATx transmitter that connects directly to the computer's keyboard, monitor, and mouse ports. The CATx transmitter sends keyboard, mouse, and video signals via CATx cable to the Xtensys switch. The CATx transmitter's video connector is HD15M and connects directly to the video out HD15F port on a computer. The keyboard and mouse connectors are available with PS/2 or USB connectors.
The transmitter will automatically adjust the gain and equalization for different CATx cable lengths and the skew compensation for perfect video with no manual adjustments. The Xtensys switch can support serial devices such as routers, hubs, and computers that require a serial interface.

Cabling

KVM user stations, computers and servers, and expansion units are easily connected to the Xtensys switch with industry standard CATx cables. Cables are usually purchased along with the Xtensys to provide quick, trouble-free installation. Provide adequate strain relief for the CATx cables to relieve excess tension on the connectors.

> Avoid routing cables close to fluorescent lights, air compressors, high voltage power sources and machinery that may create electrical noise or interference with the operation of the Xtensys switch.

Keyboard Commands

Appendix E lists the available keyboard commands that can be issues to perform a cable length measurement and the commands to fine tune the video gain and equalization if needed.

System security

Security is a very important concern, especially in the environments most Xtensys switches are commonly installed in, such as data centers and server rooms. The Xtensys system can be secured with a unique configuration password allowing only authorized personnel access to the configuration menus and the system set-up functions, including creating and assigning users, profiles, and groups. Each user can be assigned a unique password that controls the type of access to the connected equipment. The user access levels are view, share, control, and private.

- User profiles set to the View mode allow users to switch to any computer, but have only view privileges.
- User profiles set to the Share mode allow users to take keyboard and mouse control of a computer on a first come, first serve basis. Control of the computer is based on the time-out value.
- User profiles set to the Control mode allow users to take exclusive control of a computer. No time-out value is invoked. Other users that try to connect to the same computer can only view the video. They have no keyboard or mouse control until the user with the control disconnects from the computer.
- The Private mode is the same as the control mode except other users cannot view the video or access the computer.

Site planning

Organizing your site and planning the placement of the computers, the User stations, the Xtensys switches, and the routing of the cables is a key part in the installation and configuration process. Care should be taken when connecting the computers, user stations, and the Xtensys switches. Locate the Xtensys as close as possible to the computers so the cables are as short as possible but still give some freedom of movement. Up to a total of 1,000 feet of CAT5, CAT5e, or CAT6 industry standard cables can be used. The unique feature of Xtensys is that the length and type of cable will be automatically compensated for and the skew (optional), equalization and gain automatically adjusted to provide the clearest possible display with no manual adjustments.

The Xtensys switch can be rack mounted with Rose Electronics rack mount kit. Wherever the Xtensys is located, it should be on a secure surface, free from obstructions and objects that may cause damage to the Unit or an individual.

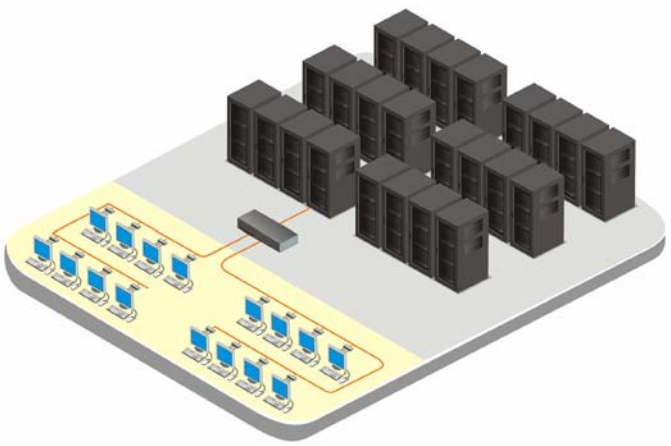
Following are a few items to consider prior to installing or configuring the Xtensys switch:

- Determine which computer will be connected to CPU port #1, #2, #3, etc
- Pre-plan the CATx cable routing
- Identify which CPU ports will be connected to a serial device and configure that port for serial.
- Each computer can be assigned a unique computer name. Names like staff, marketing, and finance make it easy to identify and connect to.
  The default computer names are Computer x (x = 1 – 1,000)
- Access to the system set-up and configuration menus can be limited by assigning a configuration password.
- Access to the computers can be limited by assigning each user a unique user ID and password and configuring the switch to require a login.
- Pre-plan the expansion cable routing for expanded systems.

INSTALLATION

Switch installation – Single unit

PLEASE REFER TO THE SAFETY SECTION BEFORE INSTALLATION



The basic installation of a single Xtensys switch is an easy and straightforward procedure. To install a single switch, perform the below steps for all computers/servers/serial devices that will be connected. It is recommended that all computers and servers be powered off.

NOTE: When entering information into the Xtensys menu system, use the numeric keys above the keyboard for entering numbers. The numeric keypad cannot be used for entering information into the menu system. Command inputs to the menu system must be entered within 2 seconds of each other or the input is aborted. Use the up/down and left/right arrow keys to maneuver within the menus. When the needed menu section is highlighted, press enter. That menu will display, an input box will display for a new value, or a choice box will display listing the supported choices for the selection.

Steps:

1. Connect a keyboard, monitor, and mouse to the Xtensys user stations corresponding connectors
2. Connect all Xtensys User stations to the Xtensys switches RJ45, KVM connectors using Catx cables.
3. Turn on all KVM stations video monitors and the Xtensys switch.
   (Wait for the internal diagnostic check to complete)
4. Connect an Xtensys transmitter to the computer's keyboard, monitor, and mouse ports.
5. Connect a CATx cable from the Xtensys transmitter to the assigned CPU port on the Xtensys unit.
6. Switch the KVM station to the CPU port being tested. (starting with CPU port #1). This is done by pressing and releasing the left [Ctrl] key and within 2 seconds, type in the CPU port # being configured (starting with 1) and press [Enter]. A connection dialog box will display showing the connection status.
7. Pre-configure the Xtensys CPU port, if connected to a serial device.
8. Boot the computer the KVM station is connected to if the computer power was off. You should see the boot-up sequence on the KVM monitor.
9. Verify that the keyboard, video, and mouse on the connected computer function properly before proceeding. Verify that other KVM user stations operate properly.
10. Switch the KVM station to the next sequential CPU port as explained in step 6 and perform steps 7- 9 for that computer and for the remaining computers.

This completes the basic installation of a single Unit. You can switch to any connected computer from any User station by pressing and releasing the left [Ctrl] key, typing in the computer port number to switch to and press [Enter]. You can also switch to a computer by displaying the "Computer select" screen [Ctrl] + [ESC]. Select the computer to switch to from the list and press [Enter]. You will be immediately switched to that computer.

MENU SYSTEM

Menu Structure

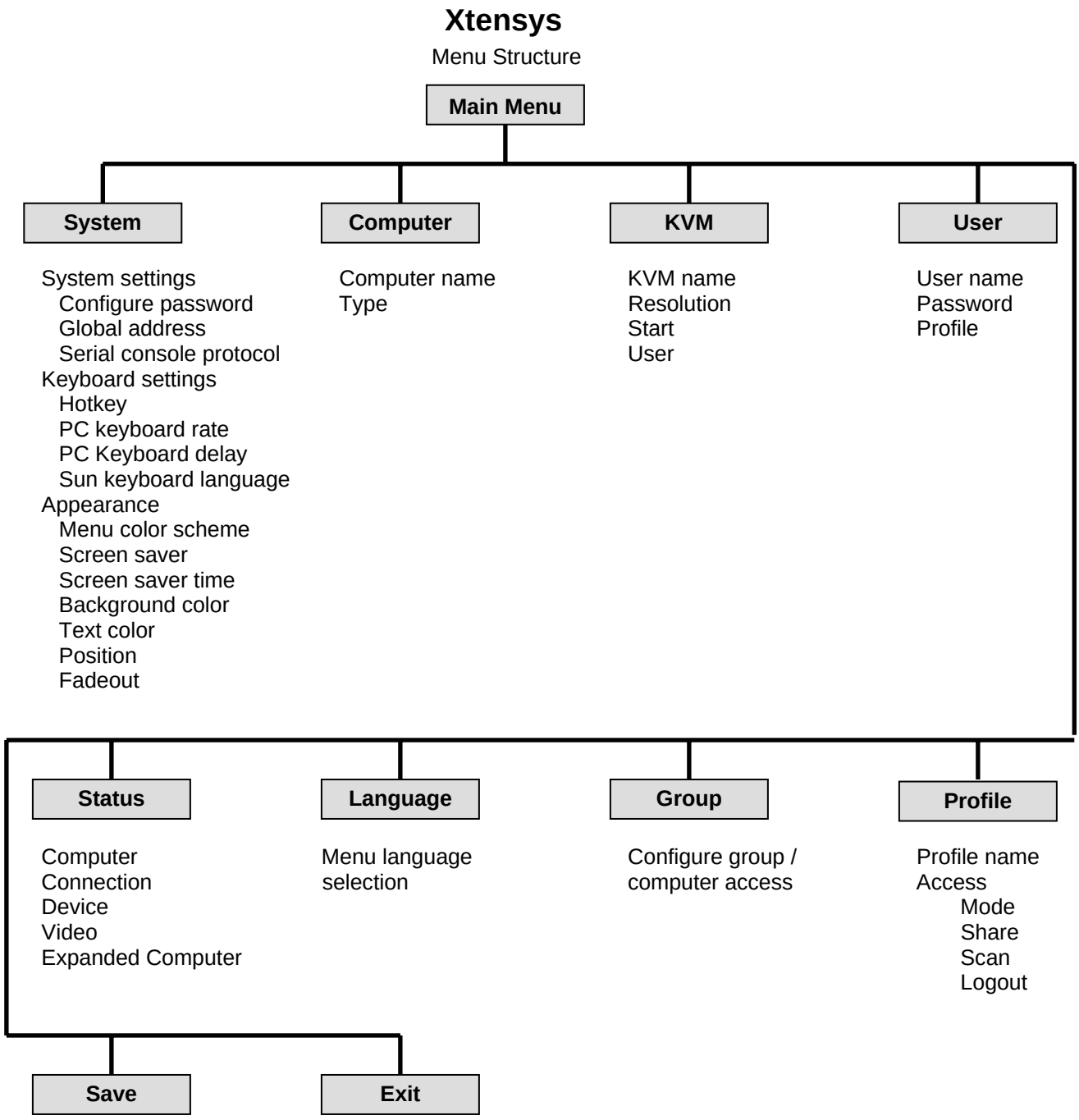


Figure 3. Menu structure

Use only the numeric key above the keyboard for entering numbers. The numeric keypad will not work for entering numbers.

Menu System

Main Menu

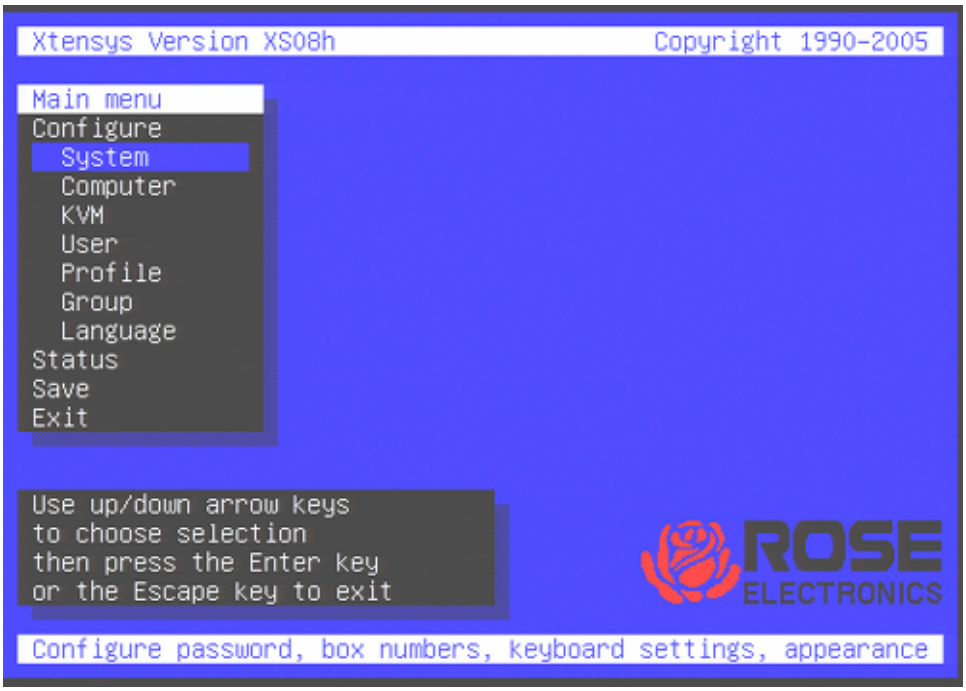


Figure 4. Main configuration menu

Save all changes made. If not saved, changes will be lost when power is removed from a Unit.

The Main configuration menu is the starting point for the configuration menus. From this menu, you can configure the System, Computers, KVMs, Users, Profiles, Groups, and Languages. To display the "Main menu", press and release the left control [Ctrl] key, then the F12 key. Command characters following the press and release of the left control [Ctrl] key, like the F12 key, must be entered within 2 seconds or the command is aborted. All numeric inputs to the menu system must be done using the numeric keys above the keyboard. The numeric keypad cannot be used for entering numbers. Keyboards that do not have separate page up and page down keys, the page up and page down keys on the keypad can be used for scrolling through the menu pages. The main menu will display on top of a currently connected computers video. If no computer is connected to supply the video, the display's background is black.

When you select (highlight) a menu section and press [Enter] that section's menu will display, an input text box will display for a new value, or a list of supported choices will display. Enter or select the information needed and press [Enter]. To return to the previous page or abort an input, press the [Esc] key. All changes made to the menu system are only temporary. They are in effect as long as power is applied to the Unit. Once power is removed, the changes are aborted unless they have been saved. The text box at the bottom of the menu screen provides a brief explanation of the menu option that is selected.

The following pages explain the Xtensys menus and the options available.

Configure system

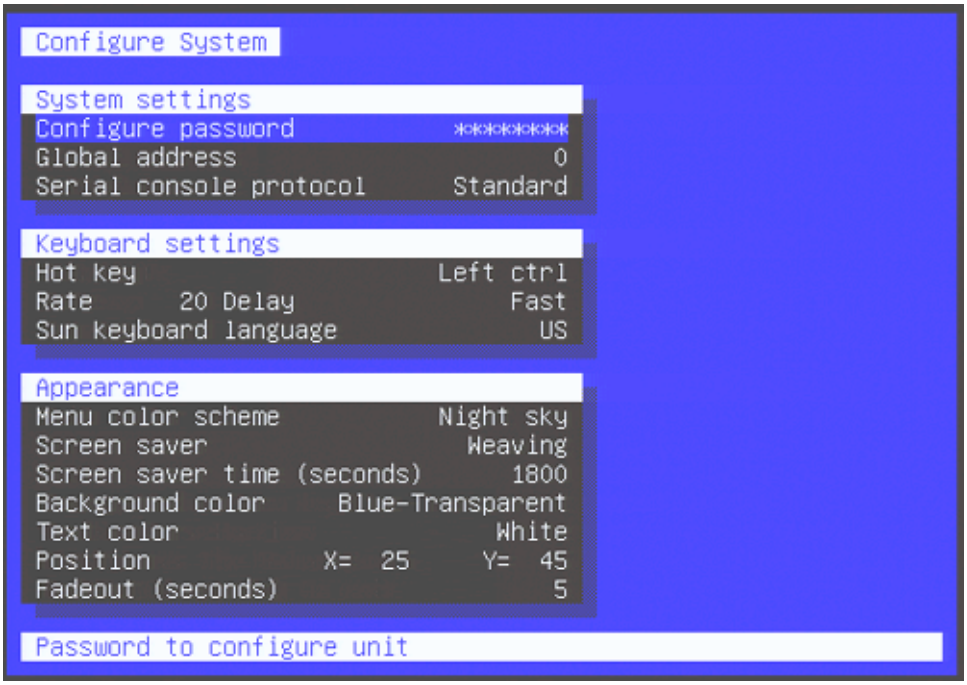


Figure 5. Configure system menu

Selecting “System” from the main menu displays the “Configure system”” menu. This menu allows you to configure the System, KVM keyboard, and Appearance settings. Each “Configure system” section is explained below.

“System settings”

Configure password (Default: no password)
The “Configure password” selection is used to add a new or change an existing configuration password. This password prevents unauthorized access to the configuration menus. Passwords are case sensitive, 8 characters max.

To create or change a password, select “Configure password” and press [Enter]. An input box will display to enter the password. Type in the password and press [Enter]. Whenever the menu system is called up, (Left Ctrl, F12) this password must be entered to gain access to the configuration menus.

Global address (Default: 0)
`This function is currently not implemented and will be added later.`

Serial console protocol (Default: Standard)

Standard, Switch, or Events

“Keyboard settings”

Hot key (Default Left Ctrl)
Defines the hot key sequence to invoke the menu system and computer select display. Hot key options are:

- Left Ctrl
- Right Ctrl
- Print screen
- Scroll lock

PC keyboard rate (chars/sec) (Default: 20)
This option adjusts the KVM keyboard action when you hold down a key to repeat a single character. Valid inputs are 1-31.

PC keyboard delay (Default: Fast)
This option adjusts the delay between when a key is pressed and held and when it begins to send repeated characters to the selected computer.
The options are:
- Slow
- Medium
- Fast
- Fastest

Sun keyboard language (Default: US)
Determines the response to a Sun computer's query for the keyboard language type used. To change the Sun keyboard language type, select it and press [Enter]. A selection box will display showing the supported Sun language choices. Use the up/down arrow keys to select the desired language and press [Enter].
The Sun keyboard language choices are:

- US
- US-Unix
- Francais
- Dansk
- Deutsch
- Italiano
- Nederlands
- Norsk
- Portugues
- Espanol
- Svenska/Suomea
- Franco-Suisse
- Schw-Deutsch
- United Kingdom
- Hankuko
- Tai-oan
- Nihongo
- Canadienne

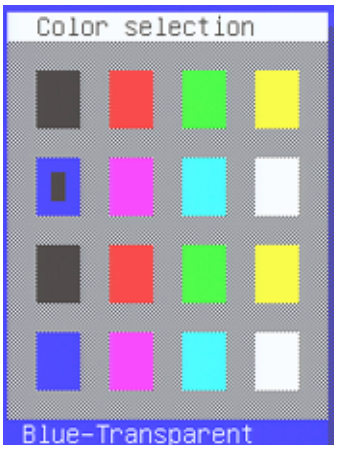
"Appearance settings"

Menu color scheme (Default: Night sky)
Sets the colors for the configuration menus. To change the color scheme, select "Menu color scheme" and press [Enter]. A selection box will display showing the supported color schemes. Use the up/down arrow keys to select the desired scheme and press [Enter].
The menu color schemes choices are:
- Night Sky – cyan, magenta, white, and blue
- Tuxedo – black, red, and white
- Aquarium – yellow, magenta, blue, cyan, and white
- Forest – green, black, cyan, and blue

Screen saver (Default: Weaving)
A screen saver reduces monitor burn-in and adds an additional level of security. The screen saver automatically activates when there is no keyboard or mouse activity for an adjustable period. To change the screen saver type, select it from the menu and press [Enter]. A selection box will display showing the supported screen saver choices. Use the up/down arrow keys to select the desired screen saver and press [Enter].
The screen saver choices are:
- Black screen
- Fireflies
- Weaving
- Bounce

Screen saver time (seconds) (Default: 1800 seconds)
Determines the period of keyboard or mouse inactivity before activating the screen saver. To change the screen saver time, select it from the menu and press [Enter]. An input box will display to enter a new screen saver time. Enter a new value from 1 to 9999 seconds and press [Enter].
Entering a value of 0 (zero) disables the screen saver.

Background color / Text color (Default: Background = Cyan / Text = Black)
This option sets the background or text colors for the connection status and computer select screens. Colors can be one of eight solid or transparent colors. To change the background or text color, select it from the menu and press [Enter]. The color selections will display showing the solid and transparent color choices. Use the arrow keys to select the desired color and press [Enter].
The color choices are:



Note: Do not set the background and text colors the same.

Position (Default: X = 25, y = 45)
This option adjusts the screen position of the connection status box. Once set, this position is maintained at all video resolutions. To change the connection status box position, select it from the menu and press [Enter]. Use the arrow keys to position the status box anywhere on the screen and press [Enter] when the desired position is reached.
Do not set the screen position off the visible screen area. This could cause rainbows or bars of shaded video.
Valid position ranges are:
Horizontal: 0 – 64, Vertical: 0 – 99

Fadeout (seconds) (Default: 5 seconds)
Sets the amount of time the connection status box displays.
Valid fadeout times are 0 – 255 seconds. A value of zero disables displaying the connection status box; a value of 255 will cause the connection status box to always be displayed. If the connection status box does not display when switching to a computer, increase the fadeout time. Some monitors will not display the connection status box if the fadeout time is less than the time it takes the monitor to sync to a new video signal. To change the fadeout time, select it from the menu and press [Enter]. Enter a valid new time in seconds and press [Enter].

Configure computers

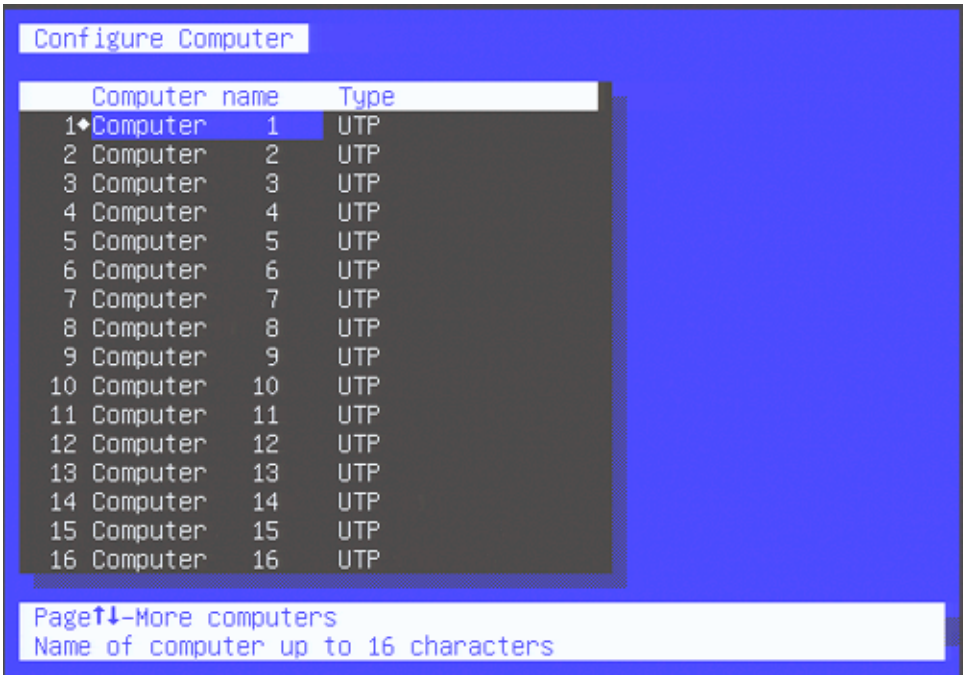


Figure 6. Configure computer menu

The “Configure computer” menu allows you to change each selected computers name and type. The left (untitled column) indicates the logical location (port) that the computer is connected to.

Computer name (Default: Computer x)
To change the computer name, select it from the menu and press [Enter]. An input box will display to enter a new computer name. Type in the new name and press [Enter]. Names can be 16 characters in length, case sensitive. Use the page up/down keys to show more computers.

Type (Default: UTP)
The type field defines to the system the type of computer connected to each port, UTP or serial. Selecting the type field for a selected computer and pressing enter will display the selection choices for that port. Select UTP or one of the serial options for each connected computer.

Configure KVM

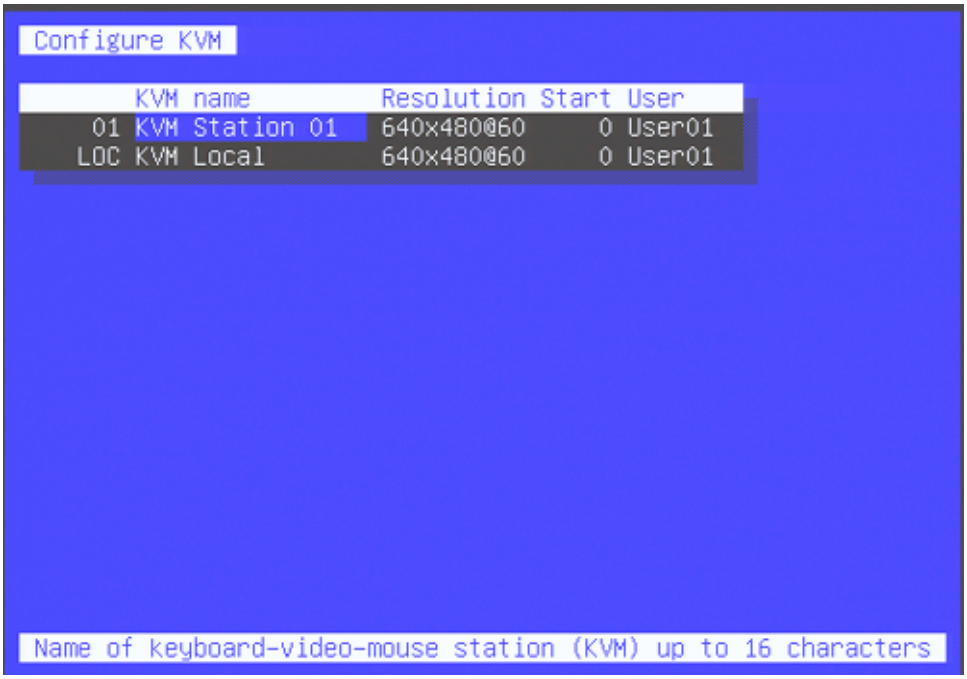

Configure KVM
KVM name Resolution Start User
01 KVM Station 01 640x480@60 0 User01
LOC KVM Local 640x480@60 0 User01
Name of keyboard-video-mouse station (KVM) up to 16 characters

Figure 7. Configure KVM menu

The “Configure KVM” menu allows you to change each selected KVMs name, resolution, start, and user parameters.

KVM name (Default: KVM Station x)
To change the KVM name, select it from the menu and press [Enter]. An input box will display to enter a new KVM name. Type in a new name and press [Enter]. KVM names can be 16 characters in length, case sensitive.

Resolution (Default: 640x480@60Hz)
Selects the resolution and refresh rate of the on-screen display when no attached computer video is present. If a computer video is shown, the detected video resolution from the connected computer is used.

To change the resolution for a selected KVM station, select the KVM station to change the resolution and using the left arrow key, select the resolution field and press [Enter]. A list of supported resolutions will display. Select the new resolution from the list and press [Enter]. The supported resolutions are:

- 640x480@60Hz
- 640x480@72Hz
- 640x480@75Hz
- 640x480@67Hz
- 832x624@75Hz
- 1152x900@66Hz
- 1152x900@76Hz

Start (Default: 0)
Assigns the CPU port number the KVM station will connect to on start up and login. 0 = no connection. To change the value, select it from the menu and press [Enter]. Type in the CPU port number the selected KVM station will connect to upon start up or login and press [Enter].

User (Default: User xx)
This field is used to assign a specific user to a KVM station. To change the user, first select the KVM station, then select the user field and press [Enter]. A selection box will display a list of user names followed by "Login". Select the user to assign to the selected KVM station and press [Enter]. Use the page up/down keys to display more users. If "Login" is selected, the KVM user must login with their user ID and assigned password to gain access to the KVM station.

The configure user, profile, and group menus all tie together to provide access control to the computers. A group defines which computers in the system can and cannot be accessed. This group is assigned to a profile name. The profile defines how the computers (defined by the group) can be accessed. The profile is then assigned to a user or users.

When a user logs on to a KVM station, their assigned profile is validated. This profile defines which group has been assigned (which computers can be accessed), what mode the user can connect to the computers with (view, share, control, private), the share time, scan time, and logout time.

Configure user

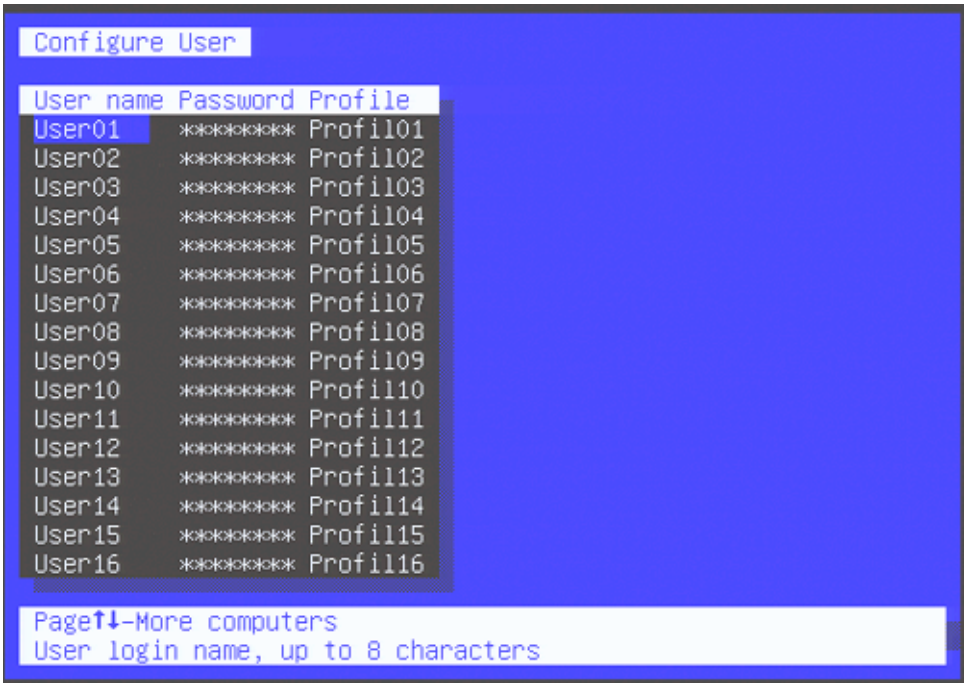


Figure 8. Configure user menu

The configure user menu is used to define a user name, assign an access password, and assign a specific profile to the user. Duplicate names are acceptable; however, all persons using the same user name will have the same access rights.

User name (Default: User xx, where x = 1 to 80)
To change a user name, select it and press [Enter]. An input box will display. Type in a new user name and press [Enter]. (8 characters max. case sensitive)

Password (Default: no password)
This field assigns a unique password to a selected user. Any user station that has "Login" enabled, the user must enter their username and password to gain access to the station. To assign or change a user password, select the user, then the password field and press [Enter]. An input box will display. Type in a password for the selected user and press [Enter]. Passwords can be up to 8 characters in length and are case sensitive.

Profile (Default: Profile x, where x = 1 to 80)
This field is used to assign an access profile to a selected user.
Profiles can be defined to limit the type of access to the computers. To change an assigned profile for a selected user, first select the user, and then select the profile to change and press [Enter]. A selection box will display listing the profiles available. Select the profile to assign to the selected user and press [Enter]. Use the page up/down keys for more profiles. Profiles are defined on the "Configure profile" menu.

Configure Profile

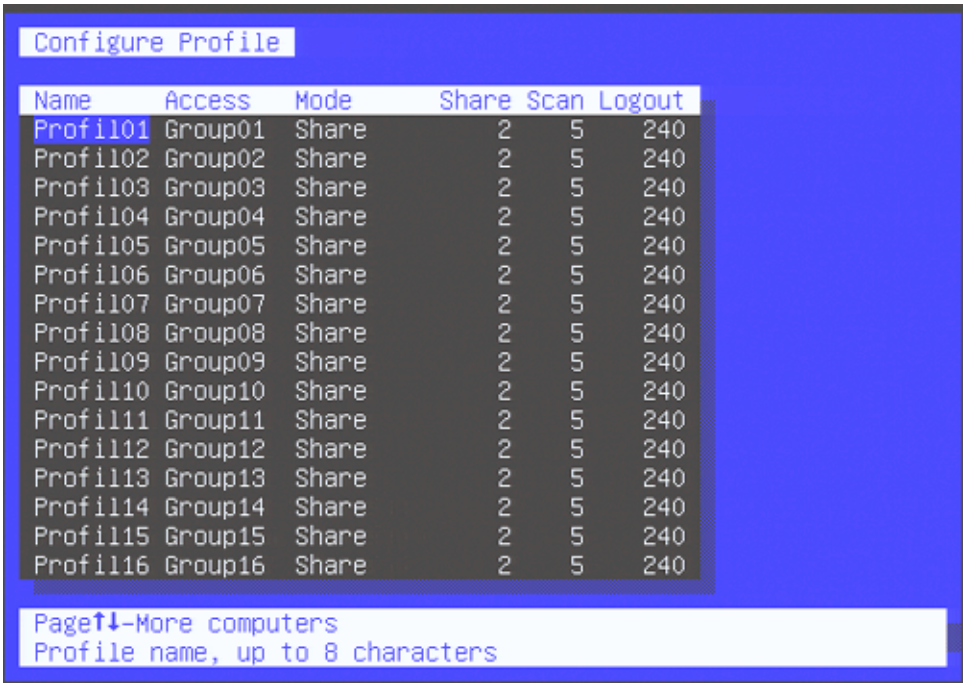

Configure Profile
Name Access Mode Share Scan Logout
Profil01 Group01 Share 2 5 240
Profil02 Group02 Share 2 5 240
Profil03 Group03 Share 2 5 240
Profil04 Group04 Share 2 5 240
Profil05 Group05 Share 2 5 240
Profil06 Group06 Share 2 5 240
Profil07 Group07 Share 2 5 240
Profil08 Group08 Share 2 5 240
Profil09 Group09 Share 2 5 240
Profil10 Group10 Share 2 5 240
Profil11 Group11 Share 2 5 240
Profil12 Group12 Share 2 5 240
Profil13 Group13 Share 2 5 240
Profil14 Group14 Share 2 5 240
Profil15 Group15 Share 2 5 240
Profil16 Group16 Share 2 5 240
Page↑↓-More computers
Profile name, up to 8 characters

Figure 9. Configure profile menu

The configure profile menu is used to assign computer access levels, modes, share, scan and logout times.

Name (Default: Profilxx, where xx = 01 to 80)
The profile name can be changed to any name up to 8 characters in length. The name can be a specific user, a group of users within a department, a business department, or any name that defines the profile. To change the profile name, select the one to change and press [Enter]. An input box will display. Type in a new profile name and press [Enter].

Access (Default: Groupxx, where xx = 1 to 80)
This field is used to assign each profile to a group. To change the access for a selected profile, select the profile to change then select the group to change and press [Enter]. A list of groups will display. Select the group that has been set-up for the selected profile and press [Enter]. A group is set up on the configure group menu.

Mode (Default: Share)
This field assigns 1 of 4 modes to a profile. To change the mode, select the profile to change the mode, and then select the mode to change and press [Enter]. A selection box will display. Select the mode needed and press [Enter]. The modes are:

- View – Profiles set to the view mode allow users to switch to any computer, but have only view privileges.
- Share – Profiles set to the share mode allow users to take keyboard and mouse control of a computer on a first come, first serve basis. Control of the computer is based on the time-out value entered in the share column.
- Control – Profiles set to the control mode allow users to take exclusive control of a computer. No time-out value is invoked. Other users that try to connect to the same computer can only view the video. They have no keyboard or mouse control until the user with the control disconnects from the computer.
- Private – This mode is the same as the control mode except other users cannot view the video or access the computer.

Share (Default: 2 seconds)
This feature allows other users to take keyboard and mouse control of a computer after a specific time of no keyboard or mouse activity by a user. To change the Share time for a given profile, select the profile, then the Share to change and press [Enter]. An input box will display. Type in a new share value in seconds and press [Enter]. Valid share values are 0 to 9999 seconds. The share value is only valid if the profile mode is share.

Scan (Default: 5 seconds)
When a user invokes the scan function, this feature sets the time the video is displayed before switching to the next sequential computers video. To change the scan rate, select the profile, then the scan rate to change and press [Enter]. An input box will display. Type in a new scan time and press [Enter]. Valid scan times are 0 to 9999. If the video is not present during the scan mode, the scan value may be set to low and the monitor cannot synchronize to the video fast enough to display it. This usually happens with a scan value of 4 or lower. If this problem occurs, increase the scan value. 0 (zero) is a valid entry but not recommended.

Logout (Default: 240 minutes)
This setting disconnects and logs out a user after the set period of no keyboard or mouse activity. To change the logout value, select the profile, then the logout time to change and press [Enter]. An input box will display. Type in a new logout time and press [Enter]. Valid times are 0 to 9999 minutes. A value of 0 (zero) disables the automatic logout function. If login is enabled for a KVM station, but the Logout time is set to zero, the user remains logged in until they manually log out using the [Ctrl] L command.

Configure Group

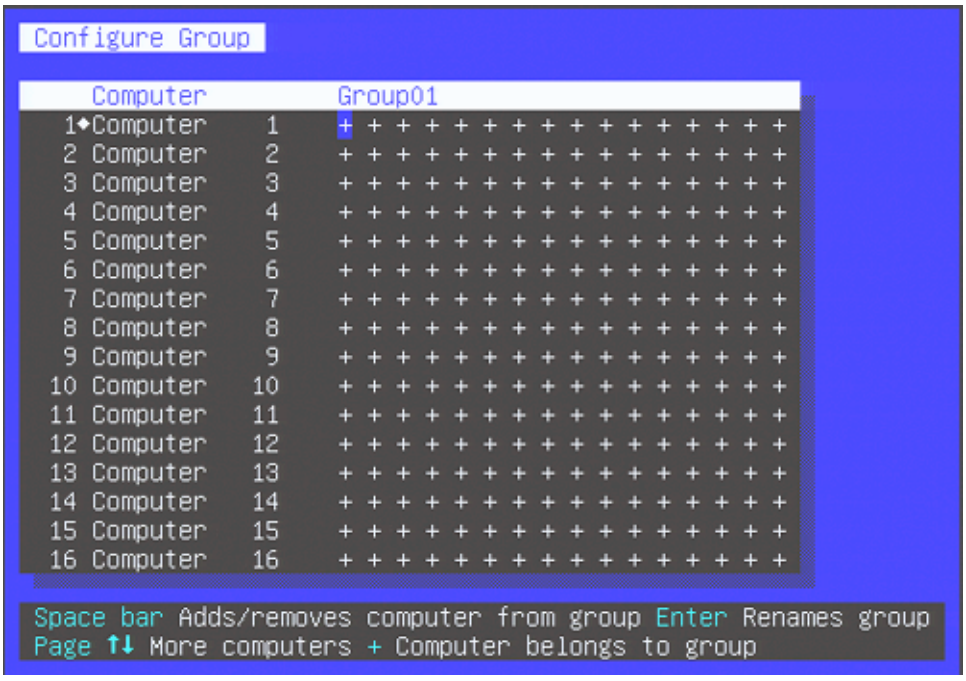

Configure Group
Computer Group01
1 Computer 1 + + + + + + + + + + + + + + +
2 Computer 2 + + + + + + + + + + + + + + +
3 Computer 3 + + + + + + + + + + + + + + +
4 Computer 4 + + + + + + + + + + + + + + +
5 Computer 5 + + + + + + + + + + + + + + +
6 Computer 6 + + + + + + + + + + + + + + +
7 Computer 7 + + + + + + + + + + + + + + +
8 Computer 8 + + + + + + + + + + + + + + +
9 Computer 9 + + + + + + + + + + + + + + +
10 Computer 10 + + + + + + + + + + + + + + +
11 Computer 11 + + + + + + + + + + + + + + +
12 Computer 12 + + + + + + + + + + + + + + +
13 Computer 13 + + + + + + + + + + + + + + +
14 Computer 14 + + + + + + + + + + + + + + +
15 Computer 15 + + + + + + + + + + + + + + +
16 Computer 16 + + + + + + + + + + + + + + +
Space bar Adds/removes computer from group Enter Renames group
Page ↑↓ More computers + Computer belongs to group

Figure 10. Configure group menu

The configure group menu allows you to assign a computer to one or more groups. Users that are assigned a profile that contains a specific group name can only access the computers within that group. It they try to access a computer that is not within the assigned group, the error “Not in access group” will display in the connect box. The left computer column displays the computer names. To change a group name, select it and press [Enter].

This menu is an array of groups (x) and computers (y). Moving the arrow key to the right from one plus (+) to another plus (+) for a selected computer name changes to the next group. A plus (+) means the computer belongs to that group, a blank means the computer is not in that group and cannot be accessed by a user assigned to this group. To change the group membership, select the group for a selected computer and press the space bar to toggle between the two states, + or blank. Default: (All computers in all groups)

Configure language

Figure 11. Configure language menu

Selecting “Language” from the “Main” menu displays a choice box with 6 different language options. Select the language needed and press [Enter]. This changes all the menus and displayed information to that selected language.
The language options are:

- English
- Francais
- Deutsch
- Espanol
- Italiano
- Portugues

System status

The system status display is a very powerful and useful tool for monitoring, troubleshooting, and reporting the connection status, computer status, video status and device status. The status screens display reported information from all devices connected in the system.

Connection status display

This screen displays the KVM name, the CPU name the KVM is connected to, the User name, Mode, and Time.

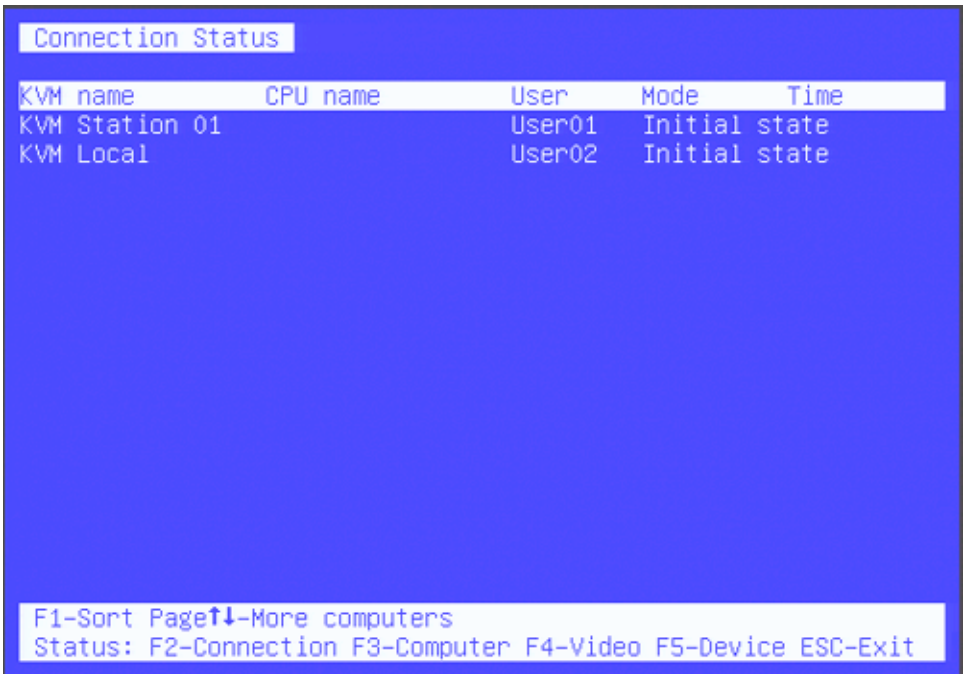

Connection Status
KVM name CPU name User Mode Time
KVM Station 01 User01 Initial state
KVM Local User02 Initial state
F1-Sort Page↑↓-More computers
Status: F2-Connection F3-Computer F4-Video F5-Device ESC-Exit

Figure 12. Connection status display

Pressing the F3 key displays the Computer status

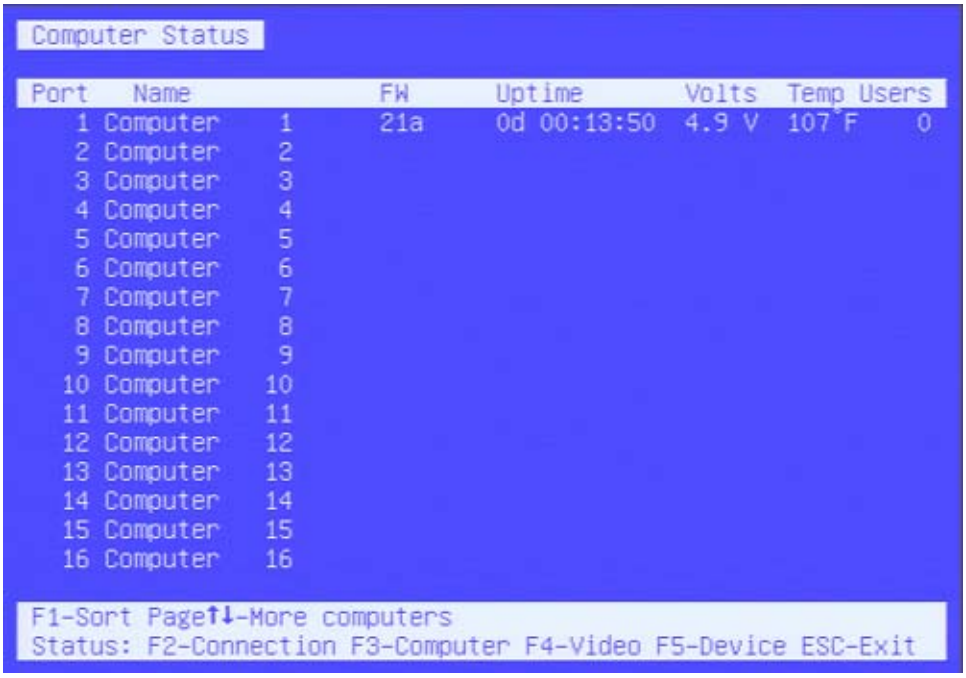


Figure 13. Computer status display

The computer status display reports the firmware version (FM column) of the CATx transmitter connected to each computer. The uptime, CPU voltage, temperature and users are also reported.

Pressing the F4 key will display the video status for each connected computer.

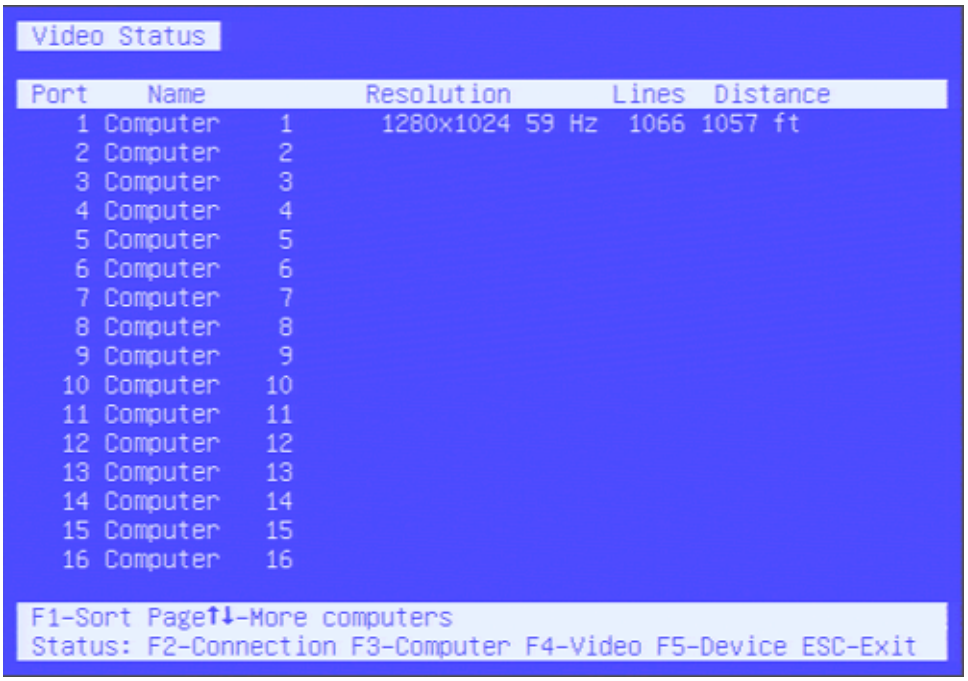
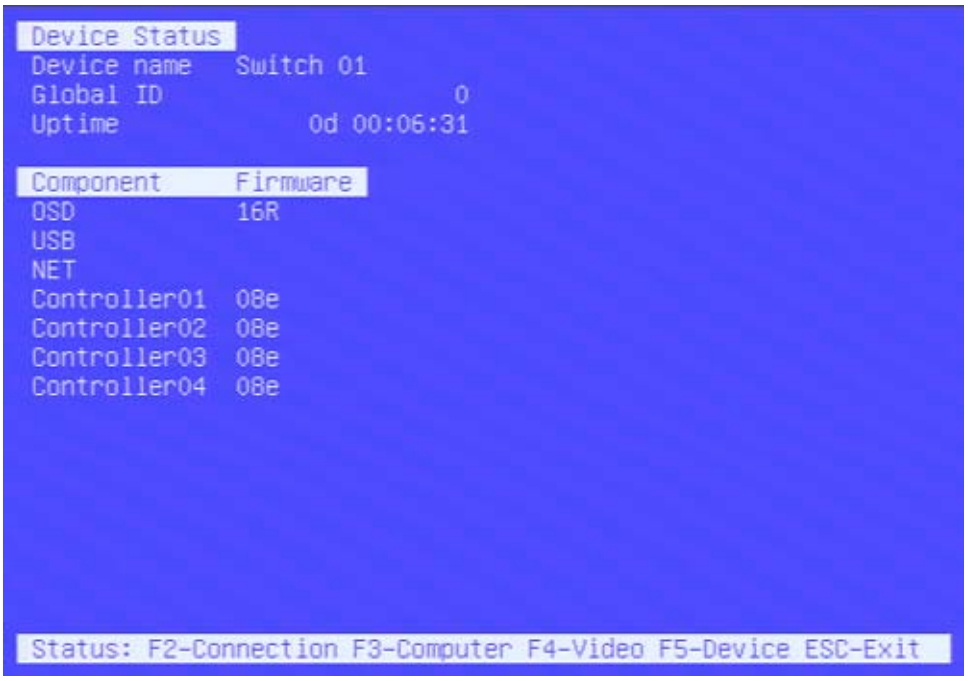


Figure 14. Video status display

The video status display reports the resolution, lines, and CATx cable distance for each connected computer.

Pressing the F5 key displays the device status.



The Device Name function is currently not implemented and will be added later.

Figure 15. Device status display

The device status display reports the device name, the global ID, uptime, components and firmware versions

Save menu

Figure 16. Save menu

When changes are made to any configuration, they must be saved in flash memory to insure that the changes will be active after a power cycle. It is recommended that all users be logged off from all systems prior to saving any configuration changes. To save the settings, select save and press [Enter].

A YES/NO selection box will display.
Choose “YES” to save the changes to flash memory on all powered-on Xtensys switches.

Choose “NO” for temporary or incorrect changes. The temporary settings will only be in effect as long as power is applied to the Unit. Once power is cycled, unsaved changes, other than the starting computer number, are lost and the previously saved configuration settings will be effective.

Operating Instructions

User operating instructions

The following instructions apply to all Xtensys switches and user stations.

This section explains the operating functions of the on-screen displays, the login procedure, connect procedure and other commands needed to easily use the Xtensys switch and its capabilities.

To start using your Xtensys switch, you first need to become familiar with the keyboard commands. The available keyboard commands are shown in Table 1. All keyboard commands start with an attention sequence by pressing and releasing the left [Ctrl] key, then the additional command characters. The additional command characters must be entered within two seconds of each other or the command is aborted.

Commands are not case sensitive and are shown in upper or lower case for clarity only. Do not use the [SHIFT] key or the numeric keypad to enter any commands. [Ctrl] in Table 3's, Key Sequence column is a press and release function of the left [Ctrl] key. The Ctrl Hot Key can be changed using the configure system menu to:

- Left Ctrl
- Right Ctrl
- Print screen
- Scroll lock

If the HOT KEY has been changed to one of the above four, substitute the new key for [Ctrl] in the below table.

Keyboard commands

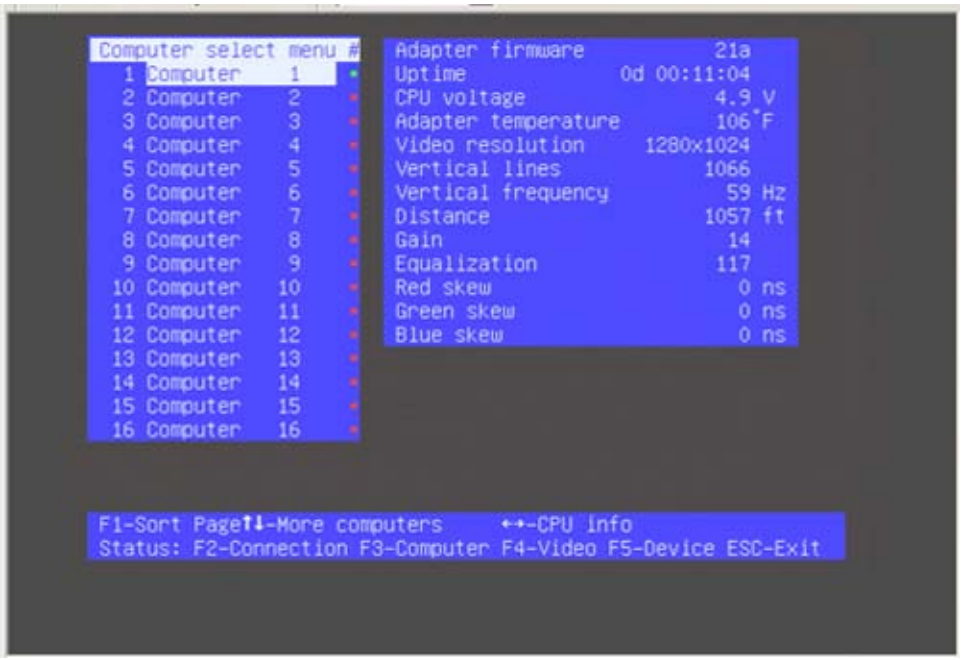
Command	Key Sequence	Description
Main Menu	[Ctrl] [F12]	Displays main menu
CPU List	[Ctrl] [Esc]	Displays CPU selection list
Direct CPU connect	[Ctrl] n [Enter]	Connects directly to the specific CPU number "n".
Connect Back	[Ctrl] [Backspace]	Connects to the previous CPU
Connect Down	[Ctrl] [Minus sign]	Connects to the previous CPU in a Group.
Connect Up	[Ctrl] [Plus sign]	Connects to the next sequential CPU in a group
KVM Status	[Ctrl] D	Displays / Removes status box.
Logout	[Ctrl] L	Logs user out if the KVM station is configured for user logins.
Disconnect	[Ctrl] Q	Disconnects the current CPU
Reset Keyboard/ mouse	[Ctrl] R	Resets / enables keyboard and mouse; enables PS/2 mouse on connected CPU
Send Null Byte	[Ctrl] N	Sends a null byte to the CPU's PS/2 mouse port. Use this command if the PS/2 mouse gets "out of sync".
Reset Mouse (NT or Unix systems only)	[Ctrl] O (not zero)	Resets the currently selected NT or Unix computers PS/2 mouse. Also switches the NT mouse driver to "wheel" mode.
Start Scan	[Ctrl] S	Sequentially steps through all connected CPUs in a group.
Stop Scan	[Ctrl] X	Turns scan "Off"

Table 1. Keyboard commands

When you first start using a user station, it may require you to login. If the user station requires a login, the login box, shown in Figure 17, will display. The login box appears when a Unit is powered on, when a user logs off, or when a preset time interval passes with no keyboard or mouse activity. If a login is required, type in your User ID and press [Enter]. (User ID is the user name defined on the configure user menu) If the user ID is validated, you can then type in your password and press [Enter]. If the password is validated, the user station can be accessed. A user may login with the same user ID and password at more than one user station. Both the User ID and password are case sensitive.

Figure 17. Login screen

Once you have access to a user station, you can switch to any of the connected computers provided your security profile allows access to that computer. To connect to a computer, you can use the “Direct CPU Connect” keyboard command or the “Computer select” menu. (See Table 1)



To access the “Computer select” menu, press and release the left [Ctrl] key, then press the [Esc] key. The computer select menu shown will display. Use the up/down arrow keys and the page up/page down keys and select the computer to switch to and press [Enter]. You will be immediately connected to that computer and a connection status messages will display providing information about the connection between the KVM station and the computer. Selecting a computer and pressing the right arrow key will display that computer’s status.

When you are successfully connected to a computer, you can use that computer and all the functions and applications associated with it from the KVM station. It is a good practice when your tasks on a computer are complete to logout from the computer, especially if you are in the private mode. To Logout of a KVM station, press and release the left control [Ctrl] key, then the “L” key. If the KVM station does not require a login, disconnect from the computer when your tasks are complete by pressing and releasing the left control [Ctrl] key, then the “Q” key

Video Setting Keyboard Commands

Video gain, equalization, red skew, green skew, and blue skew can be adjusted if needed using simple keyboard commands. To adjust these components, first invoke the computer select OSD by pressing the left control key, then the escape key. :Use the up or down arrow keys to select (highlight) the computer connection that needs adjusting, then press the right arrow key. The CPU information window shown below will display showing the present values for all settings.

To make any adjustments, first execute the below keyboard command for the adjustment needed, then use the keypad + and – key to increase or decrease the value

Adjustment	**Keyboard Command**
Gain	LCtrl + LShift + a
Equalization	LCtrl + LShift + e
Red skew	LCtrl + LShift + r
Green skew	LCtrl + LShift + g
Blue skew	LCtrl + LShift + b

Make sure the computer select window ıs open and the CPU info window is displayed prior to issuing the commands.

SERIAL FEATURES

Serial port usage (RS232)

The following procedure for establishing a connection from your standalone computer or Notebook computer to the Xtensys switch's serial port uses Windows HyperTerminal™. Refer to your users manual if a different communication program is being used.

To access an Xtensys serial port, the following items are required:

- A serial cable (RJ12, 6-wire connector and an appropriate adapter for the computer's serial port). The serial cable and adapter are provided with each switch (Rose part number KIT-ATRX)
- A dedicated computer, Notebook computer with a serial port, or a display terminal. Using a display terminal will allow you to configure the Xtensys switch, however, you will not be able to upgrade new versions of firmware. The computer or Notebook must not be attached to any Xtensys switches in the system being upgraded.
- A communications program such as Windows HyperTerminal.

Connecting the Serial Cable

Attach the serial cable from the RS232 port on the Xtensys (RJ12 connector) to the COM1 port on your computer. This COM1 port must be the same communication port HyperTerminal or your communication software is configured for.

Setting up Windows HyperTerminal

(The following instructions are using Windows; the instructions may be different for other operating systems)

Start the Windows HyperTerminal program. The "New Connection" dialog box will display requesting a name for this session. Enter a session name like "Xtensys serial option" and click 'OK". Next, the "Connect To" dialog box will display. Click on the "Connect Using" down arrow to display the connect options. Select the COM 1 option.and click "OK". The COM1 properties dialog box will display. Using the drop-down selection boxes, select the following values for each setting.

- Bits per second 115200
- Data bits; 8
- Parity; None
- Stop bits; 1
- Flow Control; Hardware

Click "OK" when all values have been entered. The HyperTerminal dialog box will display and information can be exchanged with the Xtensys switch properly. You can save this setup so the next time its needed, you can select the ICON with the name you gave it and these settings will already be established.

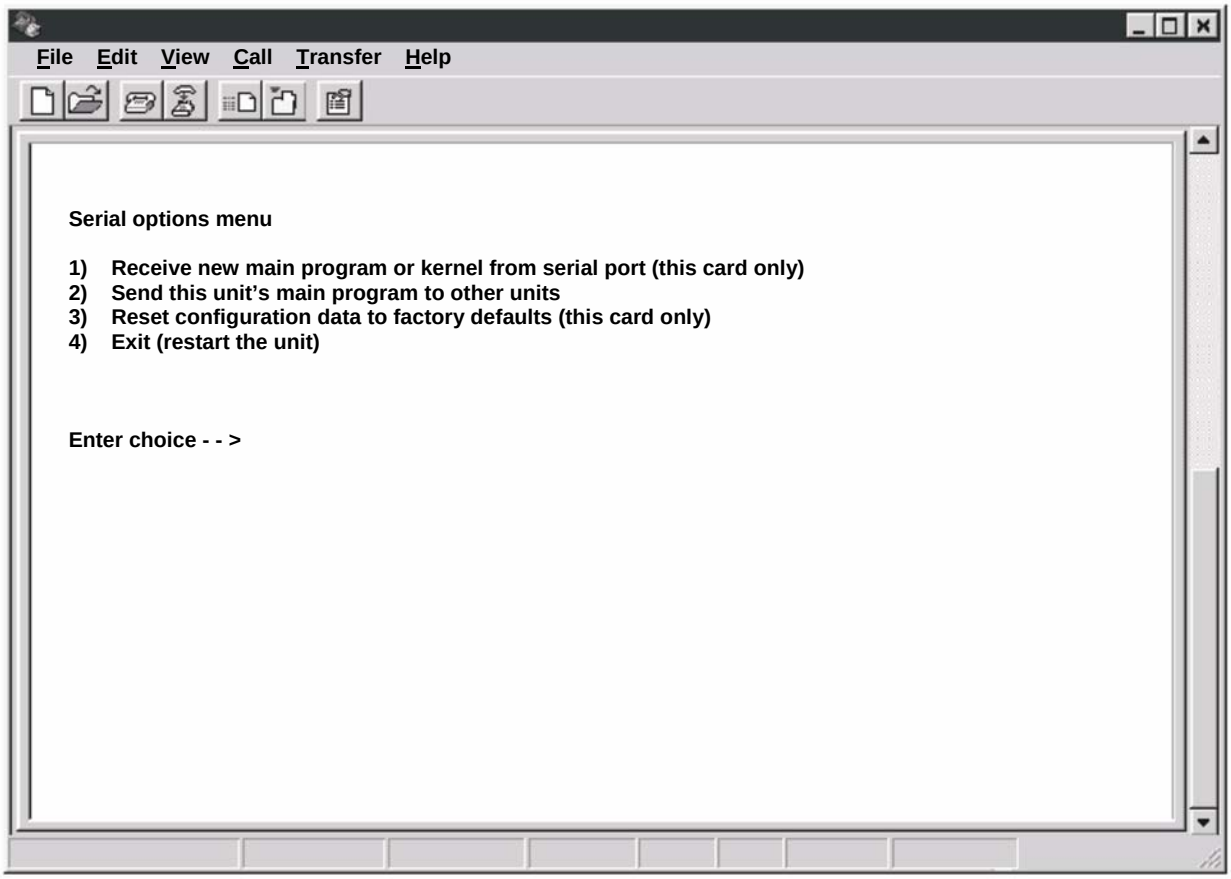
Starting a serial communication session

Verify that "Connected" appears in the bottom left corner of the HyperTerminal window. If "Connected" is not present, click on the "Call" icon. "Connected" should display in the bottom left corner.

Power on or cycle power on the Xtensys switch and press the spacebar when the message, "Hit the spacebar within 5 seconds to get serial options menu" appears on your screen. The serial menu will appear after the diagnostic check completes.

The serial menu enables you to perform certain configuration settings and perform flash upgrades.

Following explains the serial menu options:


File Edit View Call Transfer Help
Serial options menu
1) Receive new main program or kernel from serial port (this card only)
2) Send this unit's main program to other units
3) Reset configuration data to factory defaults (this card only)
4) Exit (restart the unit)
Enter choice - - >

Option 1. Receive new main program or kernel from serial port (This card only)

When new main or kernel programs are available, they can be obtained from Rose Electronics or downloaded from our web site at www.rose.com. The diagnostic screen that is displayed when the Xtensys switch is first turned on shows the Kernel and main program version that is presently installed.
You cannot update the flash memory using only a display terminal; you must use a standalone computer or Notebook and the new main or kernel program saved on that computer. It is recommended that this procedure be done on Xtensys #1, RS232 port #1. (Lower right RJ12 connector)

To load a flash upgrade file, type 3 in the Enter choice field of the serial options menu. The following message will appear:

```
Waiting for file.....................
```

Send the program or kernel file from your computer to the Xtensys using ASCII text file protocol. From HyperTerminal, click on "Transfer" and select "Send Text File". The "Send Text File" dialog box will display. Enter the file name of the updated firmware file into the File Name box and click "Open". The file transfer function will start. While the file is being sent, periods are sent to indicate the copying progress. Once the file has been sent, you will see the message:

```
Receive successful
Flash programming.....................
Flash programming successful
```

After the flash memory is programmed, the serial menu will display.

Updating the firmware or kernel programs does not change any of the custom settings that have been made.

You may receive one of the following errors during the file transfer function: checksum error, record error, or data error. These messages are followed by:

```
Receive failed
Try again Y/N
```

These error messages may be caused by any of the following items:

- Corrupted firmware upgrade file.
- Loose or defective RS232 cable.
- RS232 protocol not configured correctly.
- Bad transmit or receive levels.
- Hardware problem on transmit or receive side.

Identify and correct the transmit problem and press “Y” and then [Enter] to try again and you can resend the file.

Press “N” and then [Enter] and the prompt "Hit enter to boot " appears. Press the [Enter] key to re-start the Xtensys switches diagnostics with the firmware unchanged.

```
Boards to update - n
You are about to copy the firmware from this board to all other
boards in the system.
Are you sure? Y/N
```

Option 2. Send this Unit’s Main Program to other Units.

The main program or kernel program updates (Option 1) only have to be done on one port. Make sure power to all Xtensys switches is “ON” and they are all connected using the appropriate expansion cables.

Press 4 to send the main program to all other units, all other cards.
Press 5 to send the kernel program to all other cards.

Before responding Y, make sure that the “Boards to update” number in the message above agrees with the total number of boards in the entire system minus 1. If the number does not agree, reply N, turn on the inactive Xtensys Units, and press 4 or 5 again. When you reply Y, the following message appears:

```
Sending flash program code to system.....................
```

When complete, the system returns you to the serial options menu. Wait at least 15 seconds before restarting the Xtensys after choosing option 4 or 5 for the program to propagate to the other cards in the system.

Option 3. Reset to Factory Defaults (This CPU card only)

NOTE: Before resetting any CPU card to factory defaults, note the starting computer number listed on the Serial menu, Option 1. When resetting a CPU card to factory defaults, this number will be set to one (1) and must be changed back to the original value by using option 1 to change the starting computer number and then saved using option 7. In an expanded system, there cannot be two different Xtensys switches in the system with the same starting computer number.
Selecting option 6 restores the CPU card to its original factory configuration. The following message appears:

```
Flash programming . . . . . .
```

When the factory defaults have been restored, the following message is displayed:

```
Reset to default successful
```

The serial options menu is then displayed, indicating that this CPU board has been reset to the factory defaults.

Option 4. Exit (Restart the Unit)

Selecting option 8 exits the serial option menu. The Xtensys switch will reinitialize and the diagnostic check will run. After the diagnostic check finished, the Unit is ready to use with its new configurations. If there are more configurations needed, hit the space bar within 5 seconds and the serial menu will be brought back up to use.

SERVICE

Service Information

Maintenance and Repair

This Unit does not contain any internal user-serviceable parts. In the event a Unit needs repair or maintenance, you must first obtain a Return Authorization (RA) number from Rose Electronics or an authorized repair center. This Return Authorization number must appear on the outside of the shipping container. See Limited Warranty for more information.

When returning a Unit, it should be double-packed in the original container or equivalent, insured and shipped to:

Rose Electronics
Attn: RA_____
10707 Stancliff Road
Houston, Texas 77099 USA

Technical Support

If you are experiencing problems, or need assistance in setting up, configuring or operating your switch, consult the appropriate sections of this manual. If, however, you require additional information or assistance, please contact the Rose Electronics Technical Support Department at:

Phone: (281) 933-7673
E-Mail: TechSupport@rose.com
Web: www.rose.com

Technical Support hours are from: 8:00 am to 6:00 pm CST (USA), Monday through Friday.

Please report any malfunctions in the operation of this Unit or any discrepancies in this manual to the Rose Electronics Technical Support Department.

SAFETY

Safety

This Xtensys switch has been tested for conformance to safety regulations and requirements, and has been certified for international use. Like all electronic equipment, the Xtensys switch should be used with care. To protect yourself from possible injury and to minimize the risk of damage to this Unit, read and follow these safety instructions.

- Follow all instructions and warnings marked on this Unit.
- Except where explained in this manual, do not attempt to service this Unit yourself.
- Do not use this Unit near water.
- Assure that the placement of this Unit is on a stable surface or rack mounted.
- Provide proper ventilation and air circulation.
- Keep power cord and connection cables clear of obstructions that might cause damage to them.
- Use only power cords, power transformer and connection cables designed for this Unit.
- Use only a grounded (three-wire) electrical outlet.
- Keep objects that might damage this Unit and liquids that may spill, clear from this Unit. Liquids and foreign objects might come in contact with voltage points that could create a risk of fire or electrical shock.
- Operate this Unit only when the cover is in place.
- Do not use liquid or aerosol cleaners to clean this Unit. Always unplug this Unit from its electrical outlet before cleaning.
- Unplug this Unit from the electrical outlet and refer servicing to a qualified service center if any of the following conditions occur:
  - The power cord or connection cables is damaged or frayed.
  - The Unit has been exposed to any liquids.
  - The Unit does not operate normally when all operating instructions have been followed.
  - The Unit has been dropped or the case has been damaged.
  - The Unit exhibits a distinct change in performance, indicating a need for service.

Safety and EMC Regulatory Statements

Safety Information

Documentation reference symbol. If the product is marked with this symbol, refer to the product documentation to get more information about the product.

WARNING A WARNING in the manual denotes a hazard that can cause injury or death.

CAUTION A CAUTION in the manual denotes a hazard that can damage equipment.

Do not proceed beyond a WARNING or CAUTION notice until you have understood the hazardous conditions and have taken appropriate steps.

Grounding

These are Safety Class I products and have protective earthing terminals. There must be an un-interruptible safety earth ground from the main power source to the product's input wiring terminals, power cord, or supplied power cord set. Whenever it is likely that the protection has been impaired, disconnect the power cord until the ground has been restored.

Servicing

There are no user-serviceable parts inside these products. Only service-trained personnel must perform any servicing, maintenance, or repair.
The user may adjust only items mentioned in this manual.

Informations concernant la sécurité

Symbole de référence à la documentation. Si le produit est marqué de ce symbole, reportez-vous à la documentation du produit afin d'obtenir des informations plus détaillées.

WARNING Dans la documentation, un WARNING indique un danger susceptible d'entraîner des dommages corporels ou la mort.

CAUTION Un texte de mise en garde intitulé indique un danger suscep-tible de causer des dommages à 'équipement.

Ne continuez pas au-delà d'une rubrique WARNING ou CAUTION avant d'avoir bien compris les conditions présentant un danger et pris les mesures appropriées.

Cet appareil est un produit de classe I et possède une borne de mise à la terre. La source d'alimentation principale doit être munie d'une prise de terre de sécurité installée aux bornes du câblage d'entrée, sur le cordon d'alimentation ou le cordon de raccordementfourni avec le produit. Lorsque cette protection semble avoir été endommagée, débrancher le cordon d'alimentation jusqu'à ce que la mise à la terre ait été réparée.
Aucune pièce contenue à l'intérieur de ce produit ne peut être réparée par l'utilisateur.
Tout dépannage, réglage, entretien ou réparation devra être confié exclusivement à unpersonnel qualifié.

TROUBLESHOOTING

Troubleshooting

Computer does not boot, keyboard or mouse error received

- CPU cable is loose. Re-seat cable and hit F1 to continue or reboot computer.
- Wrong cable plugged in. Keyboard and mouse cables on PS/2 transmitter reversed.
- CATx cable is defective. Try using aCATx cable from another computer. If problem goes away, cable is defective.
- Port on Xtensys is defective. Try using another port on the Xtensys. If problem goes away, port is defective.
- Port on computer is defective. Try plugging in keyboard or mouse directly. If problem remains, computer port is defective. If computer power status LED not lit, fuse on motherboard may be blown.

Can't switch computer port from keyboard

- Power to the Xtensys was removed for less than three seconds possibly causing keyboard to lock up. Detach and reattach keyboard.
- The mode of the keyboard does not match that of the computer. Issue the mode command, usually 1 for IBM PS/2s, and 2 for all others. The default setting of the Xtensys is mode 2. Sometimes an incorrect mode will confuse the computer or keyboard. This requires re-booting the computer or resetting the keyboard by unplugging and plugging it back in.
- If trying to reach a remote port, that port is busy. Try again later.
- If trying to reach a remote port, the expansion cable is detached or the remote Unit is powered off.
- Keyboard port or computer port cable detached.

Wrong or missing characters from those typed

- The keyboard mode is incorrect; configure computer port for correct keyboard mode.

Can't access all functions of mouse

- If Microsoft BallPoint mouse, get latest Microsoft mouse driver.

Mouse does not move

- The Xtensys turned off after or not attached when computer booted or application began using mouse. Exit and re-enter application using mouse or issue reset command.
- PS/2 mouse was not attached when the Xtensys powered up or has been detached and reattached. Issue the reset command.

PS/2 mouse gets out of sync

- Reset the mouse by pressing and releasing the left Control Key, and then the R key.
- Cabling was disturbed during mouse movement. Issue the null command once or twice to re-sync the mouse. Get a later mouse driver that does not exhibit this problem.

Video fuzzy

- Cable too long or wrong type. Verify that resolution and distance match Appendix I – Video Quality Chart Upgrade cable if necessary.

Video not synchronized or wrong color

- Cable is loose. Re-seat cable.
- Wrong computer (CPU) cable used. If you have a 9515, 9517, 9518, XGA mono or similar monitor you must use special cables or adapters.
- Cable is defective. Try using cable from another computer (CPU). If problem goes away, cable is defective.
- Port on the Xtensys is defective. Try using another port on the Xtensys. If problem goes away, port is defective.

Lower resolution video OK, but can't enter high resolution mode

- Wrong CPU cable used. If you have a XGA, XGA-2, or other high-resolution video adapter, you should probably be using the CAB-CX (or C1) cable to attach your computer and KVM station.
- Driver has not been setup. Windows, OS/2, or other driver has not been configured for this resolution. Configure the driver.

APPENDICES

Appendix A. Initial factory default settings

Function	Setting	Default value
System	Password	None
	Starting Computer Number	1
	Maximum Computer	64
	PC keyboard rate (chars/sec)	20
	PC keyboard delay	Fast
	Sun keyboard language	US
	Menu Color Scheme	Night sky
	Screen saver	Weaving
	Screen saver time (seconds)	1200 seconds
	Background color	Cyan
	Text color	Black
	Fadeout	5 seconds
Computer	Computer name	Computer x
	Keyboard	PC (mode 2)
	Mouse	PS/2
KVM	Name	KVM Station x (x = 1 – 4)
	Resolution	640x480@60Hz
	Start	0
	User	N/A (from user menu)
User	User name	User x (x = 1 – 80)
	Password	None
	Profile	N/A (from profile menu)
Profile	Name	Profil x (x = 1 – 80)
	Access	N/A (from group menu)
	Mode	Share
	Share	2 seconds
	Scan	5 seconds
	Logout	240 minutes
Group	Name	Group x (x = 1 – 80)
	Assignment	All computers to all groups
Language	(Type)	US

Appendix B. General specifications

Dimensions	17.0 W x 10.0 D x 1.75 H (in) 43.24W x 25.42D x 4.4H (cm)	
Weight	8.7 lbs / 3.95 kg	
Power	120 – 230 VAC	
Resolution	1600 x 1200 @ 75Hz	
Environmental	0 – 50° C, 0% – 80% non-condensing	relative humidity
Connectors		
Power:	IEC 320 standard receptacle	
CPU:	RJ45	
User Station:	RJ45	
Local KVM:	MD6, HD15, USB	
Keyboard / Mouse	PS/2, Sun, USB (PC, Sun, Mac)	
Chassis	Metal	
Scan Interval	0 – 255 seconds	
Indicators	On-Line / selected LEDs / Power	
Switches	IEC 320 Power	

KVM Switch	
Part number	**Description**
XTS-V4X8D4	4-Remote Users / 8 CPU's
XTS-V4X16D4	4-Remote Users / 16 CPU's
XTS-V4X32D8	4-Remote Users / 32 CPU's
XTS-V4X48D12	4-Remote Users / 48 CPU's
XTS-V4X64D16	4-Remote Users / 64 CPU's
XTS-V8X32D8	8-Remote Users / 32 CPU's
XTS-V8X48D12	8-Remote Users / 48 CPU's
XTS-V8X64D16	8-Remote Users / 64 CPU's
XTS-V12X48D12	12-Remote Users / 48 CPU's
XTS-V12X64D16	12-Remote Users / 64 CPU's
XTS-V16X64D16	16-Remote Users / 64 CPU's
Remote User Station	
Part number	**Description**
XTR-11	PS2 Keyboard and Mouse / 1-Rj45 connection
XTR-11-U	PS2 / USB Keyboard and Mouse / 1-Rj45 connection
UTP Transmitters	
Part number	**Description**
XTT-MP	UTP VGA, PS2 Keyboard and Mouse
XTT-MU	UTP VGA, USB Keyboard and Mouse
XTT-MPU	UTP VGA, USB/PS2 Keyboard and Mouse
Rack Mount Kits	
Part number	**Description**

Options:
-L Optional Local Port – PS2
-LU Optional local port – PS/2 + USB

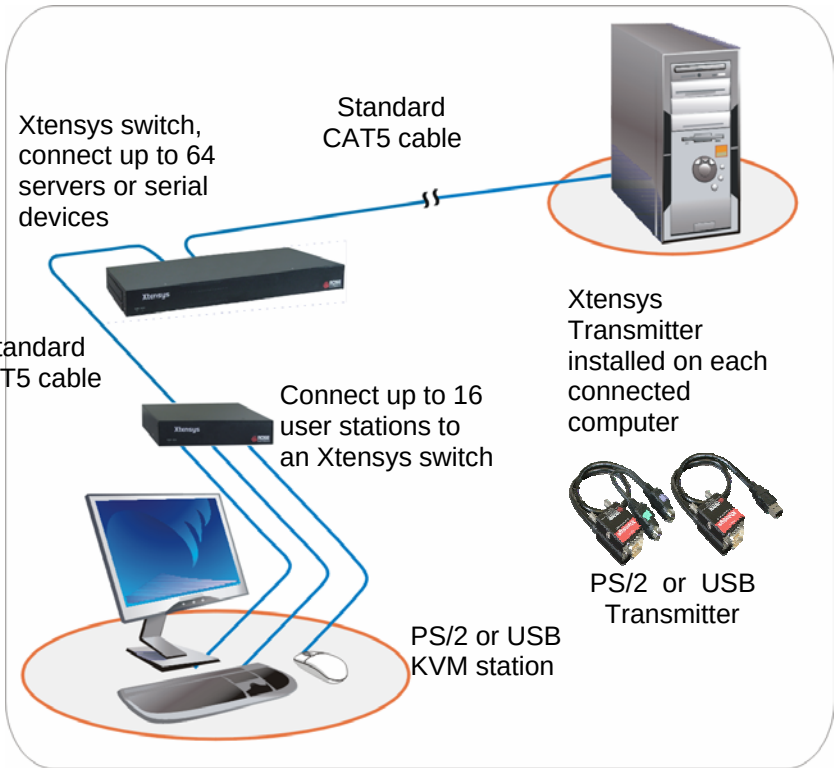
Appendix D. Quick Start Guide

The following guide will help you understand the basic single unit installation and operation procedures for the Xtensys system. The Xtensys system consists of the Xtensys switch and a remote user station for each remote user. The switch connects to your computers and to the remote user stations via CATx cabling. This greatly reduces cable bulk and cost. Connecting keyboards, monitors, and mice to the remote user stations requires no additional cables. These connect directly to the KVM station ports on the user station.

Refer to the below connectivity diagram when installing your Xtensys system. An Xtensys 8 x 32 model is used in the below example. The basic installation is the same for all models.

To start the installation of the Xtensys system, it is recommended that all equipment (Xtensys switch, remote user stations, KVM monitors, serial devices, and any other device) be powered off.

If powering off your servers and equipment is not feasible, refer to the Xtensys installation and operations manual for the proper procedure to install the Xtensys system without removing power


Xtensys switch, connect up to 64 servers or serial devices
Standard CAT5 cable
Xtensys Transmitter installed on each connected computer
Standard CAT5 cable
Connect up to 16 user stations to an Xtensys switch
PS/2 or USB Transmitter
PS/2 or USB KVM station

Up to a total of 1,000 feet of CATx cable

The multi-platform feature of Xtensys allows you to connect PCs/servers, UNIX, SUN, Mac, Linux, or other systems with no pre-configuration required. The PC port on Xtensys must be pre-configured only if a serial device is going to be connected to that port.

The first item to assess is the topology or layout of the Xtensys switch, the computers, serial devices, the remote user stations, and the CATx cable placement. Pre-planning of the layout of your switching system will make the installation process go more smoothly. Decide which PC/server or serial device will be connected to each Xtensys PC port (RJ45F rear connectors). Locate the Xtensys as close as possible to the computers and user stations so the cables are as short as possible but still give some freedom of movement. Provide proper strain relief for all cables.

Following is a step by step guide for installing and operating a single unit installation.

Step 1 – Connect the User Station(s)

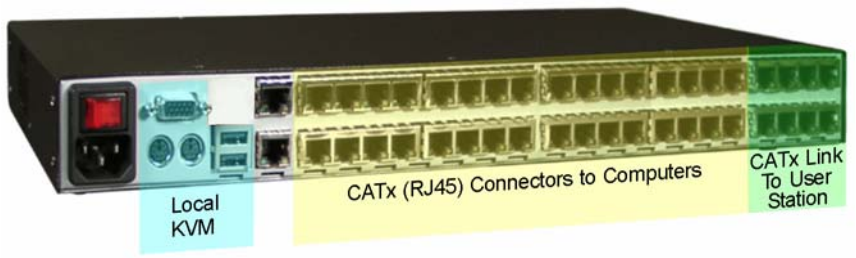
Connectors (left to right)

(1) RJ45F – Link to Xtensys
(4) USB Type A
(2) MiniDIN6F (keyboard/mouse)
(1) DB9M (serial device)
(1) HD15F (monitor)
(1) +5v input

Depending on your model, up to 16 user stations can be connected to single Xtensys. To install the user stations, first connect a CA from the RJ45F link connector to the one of the Xtensys RJ45F user ports. Next, connect your KVM station (keyboard, monitor, and the user stations PS/2 or USB and HD15F connectors. A compatible serial device can connect to the DB9M connector. Refer to the manual for user station connections for the 4, 8, or 12 CPU port models

---

Step 2 – Connect the computer(s)



The number of CATx connectors (RJ45) to the computers and User stations will vary depending on the model.

Connectors (left to right)
for 8 x 32 model

(1) IEC320 power
(1) HD15F (monitor)
(2) MiniDIN6 (keyboard/mouse)
(2) USB Type A
(2) RJ45F (Serial)
(32) RJ45F (CATx to PCs)
(8) RJ45F (CATx to user stations)

Depending on the Xtensys model, up to 64 computers, servers or serial devices can be connected to a single Xtensys unit. To connect the computers to the Xtensys switch, first connect an Xtensys PS/2 or USB CATx transmitter to the corresponding keyboard, monitor, and mouse ports on a computer. Next, connect a CATx cable from the CATx transmitters RJ45F connector to the RJ45F CPU port on the Xtensys rear panel that has been designated as the CPU port for the computer being connected. The remaining computers are connected using the same procedure, connect the transmitter to the computers keyboard, monitor, and mouse ports, and connect the CATx cable from the transmitter to the computer port on the Xtensys rear panel.

Step 3 – Connect the serial device(s)

Each CPU port on Xtensys can be configured for serial using the OSD menu system. When configured, connect a RJ45M to DB9F cable from the RJ45F CPU port on Xtensys to the DB9M serial port on a computer or serial device. Cable length restrictions apply for connecting serial devices.

Step 4 – Power on the system

It is recommended that the completed system be powered up in the following sequence:

1. Power on the KVM station ‘s monitor
2. Power on all user stations
3. Power on the Xtensys switch
4. Apply power to the all Xtensys transmitters
5. Boot all connected computers

Operating procedure

With all connections in place and the system powered up, you can connect and fully control all connected computers and serial peripherals as if you were directly connected to that piece of equipment. To switch the KVM station to any connected computer, press and release the attention key (left Ctrl key), then enter the CPU port to switch to. If you need to perform maintenance on the computer connected to CPU port #12, the command to switch to this port would be: Press and release the left Ctrl key, then within 2 seconds, enter the CPU port (12) to switch to and press enter. Instantly the KVM station now has control of the computer or device connected to CPU port #12.

Below is a summary of the keyboard commands used by Xtensys. Ctrl Key Sequence is a press and release of the left control key. Enter the command following Ctrl within 2 seconds to initiate that command.

A complete explanation of each command and also the use of the OSD is covered in the users manual. The Main OSD Menu is displayed by executing the key sequence “Ctrl + F12”. This will display the Main Menu items that are available. From this menu you can name the computers and KVM stations, set-up security for the system, configure a CPU port for serial functions, and much more. All menu items are fully covered with explanations and examples in the operations manual.

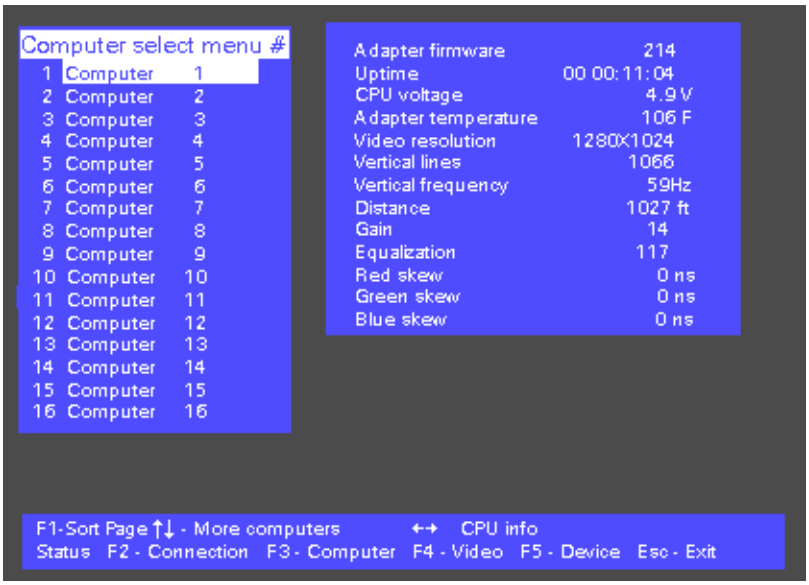
Command	Key Sequence	Description
Main Menu	[Ctrl] [F12]	Displays main menu
CPU List	[Ctrl] [Esc]	Displays CPU selection list
Direct CPU connect	[Ctrl] n [Enter]	Connects directly to the specific CPU number “n”.
Connect Back	[Ctrl] [Backspace]	Connects to the previous CPU
Connect Down	[Ctrl] [Minus sign]	Connects to the previous CPU in a Group.
Connect Up	[Ctrl] [Plus sign]	Connects to the next sequential CPU in a group
KVM Status	[Ctrl] D	Displays / Removes status box.
Logout	[Ctrl] L	Logs user out if the KVM station is configured for user logins.
Disconnect	[Ctrl] Q	Disconnects the current CPU
Reset Keyboard/ mouse	[Ctrl] R	Resets / enables keyboard and mouse; enables PS/2 mouse on connected CPU
Send Null Byte	[Ctrl] N	Sends a null byte to the CPU’s PS/2 mouse port. Use this command if the PS/2 mouse gets “out of sync”.
Reset Mouse (NT or Unix systems only)	[Ctrl] O (not zero)	Resets the currently selected NT or Unix computers PS/2 mouse. Also switches the NT mouse driver to “wheel” mode.
Start Scan	[Ctrl] S	Sequentially steps through all connected CPUs in a group.
Stop Scan	[Ctrl] X	Turns scan “Off”

Appendix E. Video adjustment keyboard commands

These keyboard commands can be used to perform a cable length measurement and fine tune the video gain and equalization.

Video Setting Keyboard Commands

Video gain, equalization, red skew, green skew, and blue skew can be adjusted if needed using simple keyboard commands. To adjust these components, first invoke the computer select OSD by pressing the left control key, then the escape key. :Use the up or down arrow keys to select (highlight) the computer connection that needs adjusting, then press the right arrow key. The CPU information window shown below will display showing the present values for all settings.



To make any adjustments, first execute the below keyboard command for the adjustment needed, then use the keypad + and – key to increase or decrease the value

Adjustment	Keyboard Command
Gain	LCtrl + LShift + a
Equalization	LCtrl + LShift + e
Red skew	LCtrl + LShift + r
Green skew	LCtrl + LShift + g
Blue skew	LCtrl + LShift + b

Make sure the computer select window is open and the CPU info window is displayed prior to issuing the commands.

ROSE ELECTRONICS

Server Management Solutions

10707 Stancliff Road
Houston, Texas 77099

Phone: (281) 933-7673
WWW.ROSE.COM